Definitive Technology®

The Leader in High-Performance Loudspeakers®

ProSub 60

PowerField® Subwoofer with
Active Crossover & Power Amplifier

Owner's Manual

Congratulations

Congratulations on your purchase of a Definitive Technology ProSub 60 Subwoofer. This revolutionary subwoofer utilizes state-of-the-art components, a non-resonant monocoque cabinet and low diffraction construction in order to achieve the most lifelike sound possible in your listening room for many years to come. The ProSub is a compact, high quality powered speaker system intended primarily for use as a subwoofer in superior quality music or home theater systems.

This ProSub 60 powered subwoofer incorporates a high current power amplifier, electronic crossover and precise equalization in order to achieve the highest possible level of low frequency performance. The amplifier and electronic crossover are completely self-contained modules which are housed in the subwoofer. The ProSub 60 incorporates Definitive's proprietary PowerField® technology, by which the amplifier is specifically engineered in conjunction with the driver for optimum load matching and power transfer characteristics. The integrated electronic crossover incorporates high level inputs and outputs as well as low level inputs, precise equalization, continuously variable low pass filter (between 40 and 150 Hz), fixed speaker level high pass filter (to match the ProMonitors) and a precision volume control. The tremendous built-in flexibility allows easy, seamless integration with all main speaker systems and optimum performance in any room. The crossover incorporates circuitry which allows for exceptional performance as either a single subwoofer (blending left and right bass channels) or when two subwoofers are used, one each for the left and right channels.

Our engineers have spent many years in developing this product. To ensure that you only experience the finest performance possible from your subwoofer, we encourage you to take a moment with this owner's manual and familiarize yourself with the proper installation and setup procedures for your subwoofer.

Safety Precautions

CAUTION! To reduce the risk of electric shock and fire, do not remove the cover or back plate of this device. There are no user serviceable parts inside. Please refer all servicing to licensed service technicians. Avis: Risque de choc electricque, ne pas ouvrir.
CAUTION! The international symbol of a lightning bolt inside a triangle is intended to alert the user to uninsulated "dangerous voltage" within the device's enclosure. The international symbol of an exclamation point inside a triangle is intended to alert the user to the presence of important operating, maintenance and servicing information in the manual accompanying the device.
CAUTION! To prevent electrical shock, match wide blade of plug to wide slot, fully insert. Attention: Pour eviter les chocs electriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.
CAUTION! To reduce the risk of electrical shock, do not expose this equipment to rain or moisture.

1. Read Instructions—All safety and operating instructions should be read before operating the device.
2. Retain Instructions—The safety and operating instructions should be retained for future reference.
3. Heed Warnings—All warnings on the device and in the operating instructions should be adhered to.
4. Follow Instructions—All operating and safety instructions should be followed.
5. Water & Moisture—The device should never be used in, on or near water for risk of fatal shock.
6. Carts & Stands—The device should only be used on carts or stands recommended by the manufacturer.
7. Wall & Ceiling Mounting—The device should be mounted on a wall or ceiling only as recommended by the manufacturer.
8. Ventilation—The device should always be located in such a way that it maintains proper ventilation. It should never be placed in a built-in installation or anywhere that may impede the flow of air through its heat sink.
9. Heat—Never locate the device near heat sources such as radiators, floor registers, stoves or other heat-generating devices.
10. Power Supply—The device should only be connected to a power supply of the type described in the operating instructions or as marked on the device.
11. Power Cord Protection—Power cables should be routed so they are not likely to be stepped on or crushed by items placed on them or against them. Special attention should be paid to areas where the plug enters a socket or fused strip and where the cord exits the device.
12. Cleaning—The device should be cleaned in accordance with manufacturer's instructions.
13. Periods Of Non-Use—The device should be unplugged when not being used for extended periods.
14. Dangerous Entry—Care should be taken that no foreign objects or liquids fall or are spilled inside the device.
15. Damage Requiring Service—The device should be serviced by licensed technicians when:
    - The plug or power supply cord has been damaged.
    - Objects have fallen or liquid has spilled inside the device.
    - The device has been exposed to moisture.
    - The device does not appear to be operating properly or exhibits a marked change in performance.
    - The device has been dropped or the cabinet becomes damaged.
16. Service—The device should always be serviced by licensed technicians. Only replacement parts specified by the manufacturer should be used. The use of unauthorized substitutions may result in fire, shock, or other hazards.

Subwoofer Installation

Your new ProSub 60 Subwoofer contains a built-in amplifier and sophisticated electronic crossover. There are several ways to install your subwoofer. One setup is not considered "better" than another; rather, each is a function of what type of entertainment system you own and how you plan to integrate your components. Read the installation suggestions below to determine which options best suit your needs. Please take care to perform all wiring procedures with your system completely powered down.

Unpacking

Each loudspeaker leaves our plant in perfect condition. Any visible or concealed damage most likely occurred in handling after it left our plant, and should be reported at once to your Definitive dealer or the delivery company that delivered your loudspeaker. Please unpack your system carefully. Save all cartons and packing material in case you move or need to ship your system. Record the serial number found on the back of the subwoofer in the appropriate place on your warranty card.

Inputs/Outputs

Your Definitive Technology ProSub 60 subwoofer operates from either high level (speaker-type) or low level (RCA-type) outputs on your electronics. Use the low level jacks when connecting the subwoofer to the left and right low level or LFE output jacks of a receiver, a preamp or a signal processor. Use the high level speaker terminal inputs to connect the subwoofer to the amplifier output (speaker) jacks of your receiver or amplifier. Use the high level output jacks to connect the subwoofer to a pair of left and right main speakers. (See wiring diagrams.)

When connecting the subwoofer to your system, it is recommended that you use high quality speaker cable and try to maintain cable runs of the same length for the left and right channels. Should you perchance experience any level of ground hum or noise, try plugging the subwoofer into the same circuit as your amplifier. Also, consult the "Troubleshooting" section of this manual. To prevent accidental damage to your subwoofer from overdriving the system, the subwoofer features an internal overload protection circuit.

Subwoofer Placement

Your Definitive Technology subwoofer has been designed to operate at frequencies generally below 150 Hz. Because low-frequency information in this range essentially is non-directional, your subwoofer can be located anywhere in your listening room that is most convenient. Also, the continuously variable low pass filter operates at a very fast roll-off, ensuring great performance wherever you place your subwoofer. There are, however, some general rules that you should bear in mind when locating your subwoofer:

1. For maximum output the subwoofer should be placed in a corner or against the wall, leaving roughly 2"-4" clearance between the subwoofer and the wall(s).

2. Corner placement will increase the subwoofer's efficiency, which in turn will increase your system's maximum output and improve the dynamic capability of the subwoofer.

3. While one Definitive Technology subwoofer will always sound great, the use of two subwoofers will definitely enhance your system's performance by providing a smoother and more consistent response pattern. Here, it is recommended that you locate the subwoofers on the same side of the room as the main speaker of the same channel.

4. Always remember that frequency response and output level are greatly influenced by the subwoofer's placement. A movement of even a foot or two can dramatically change your system's response characteristics. You should experiment with placement in your particular listening room in order to achieve the highest performance from your subwoofer.

5. Your subwoofer contains a powerful amplifier inside its cabinetry. When placing the subwoofer into a built-in cabinet, please be sure it receives a clear flow of cooling air. If your subwoofer is to be located in a closed-back cabinet, be sure to put some ventilation holes in the cabinet back behind the subwoofer's back panel.

6. Since the subwoofer has some output from the rear, if you put the subwoofer in a cabinet, leave 2"-4" around the outside of the subwoofer for the sound from the rear to get out.

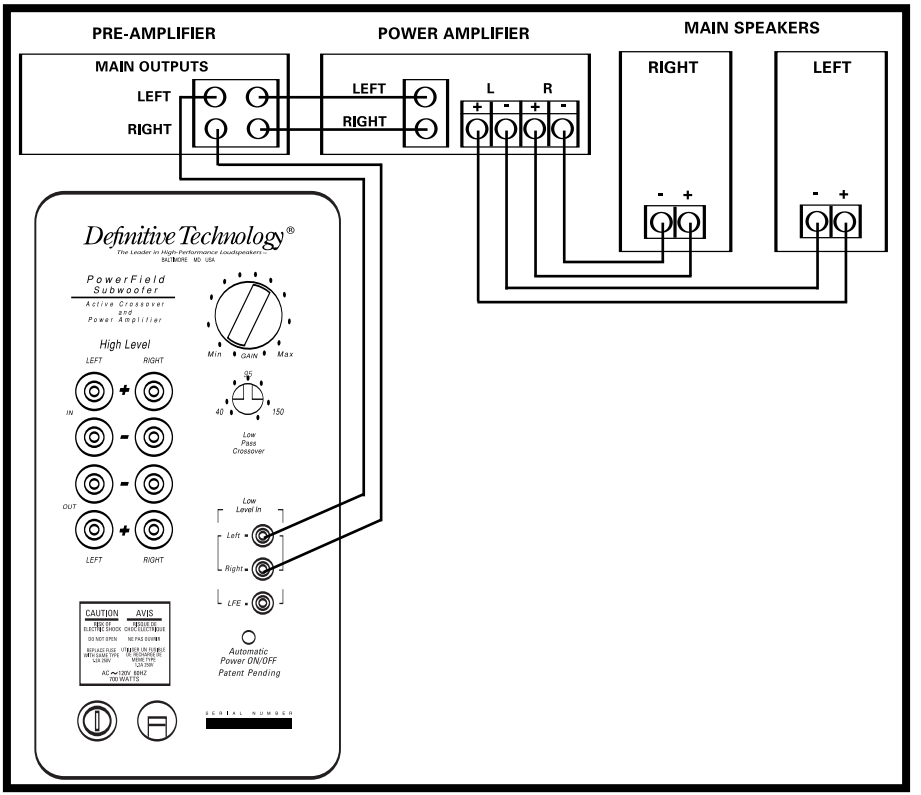
7. When using the ProSub 60 with Definitive ProMonitors, consult the ProMonitor instruction manual for other placement tips.

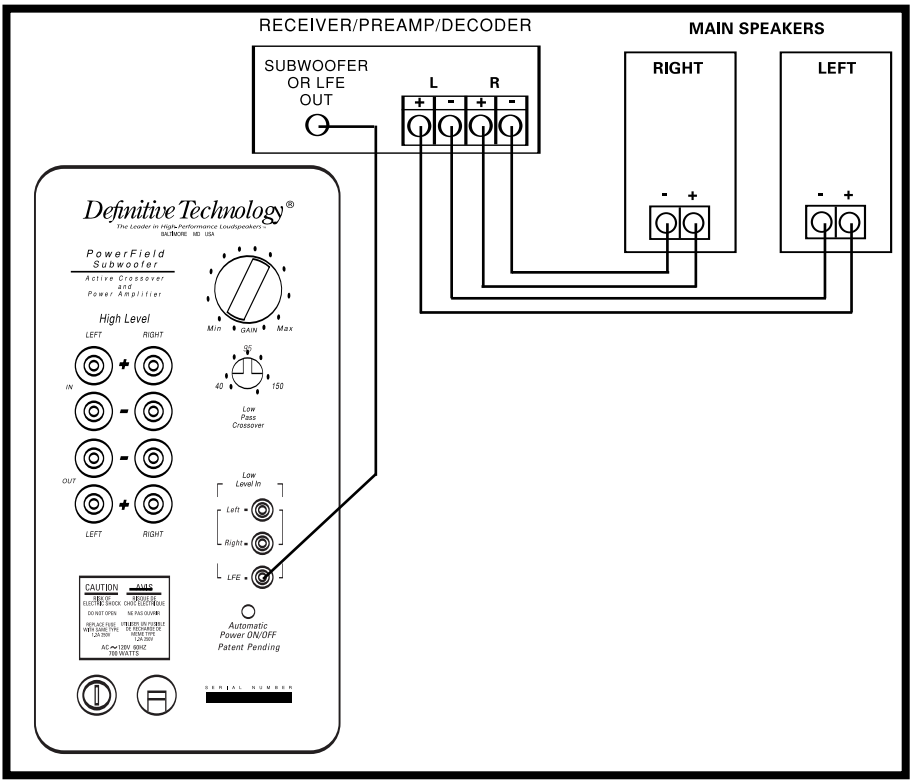
Wiring Diagrams

Low Level Connections

One way to hook up your Definitive Technology ProSub 60 subwoofer is via the low level input connectors which are RCA-type jacks designed to accept standard audio interconnect cables. For preamps and decoders, run an interconnect from the left and right outputs of the preamp or decoder to the left and right low level inputs on the subwoofer. If you have two sets of outputs, you can use one set of these; if not, you can put a Y-connector into each output (left and right) and run half of each Y back into a (left and right) main input on the preamp decoder, receiver or power amp and the other half into the (left and right) low level input on the subwoofer.

Additionally, many new model receivers, preamps and decoders feature a mono (line level) output intended to be used with subwoofers. You can feed the mono or LFE subwoofer output of your receiver or decoder to the LFE low level input on the subwoofer and achieve full performance. Often these outputs have their own low pass filter built into the circuit. If you use these outputs, this low pass filter will work in conjunction with the low pass filter found in the ProSub 60 subwoofer to





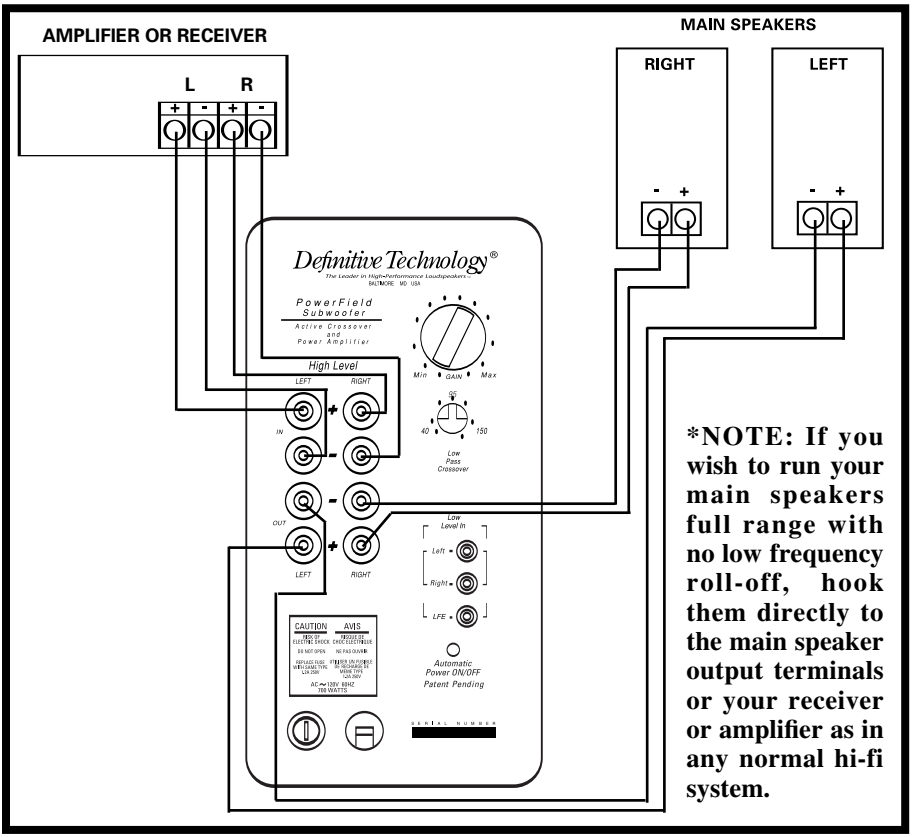
create a very steep crossover slope. Usually, if your receiver or decoder already has a built-in low pass crossover, you should turn the low pass control on your ProSub 60 to 150. Also, these subwoofer outputs tend to have less gain than main line level outputs, thus the gain control on your subwoofer may need to be adjusted accordingly for proper balance. For a slight increase in gain, however, you can use a standard, RCA-type stereo Y-connector to split the mono output into separate left and right inputs on the subwoofer. Use the LFE input on the subwoofer to hook the subwoofer up to the LFE (low frequency effects) output on Dolby Digital AC-3* decoders, receivers, etc. You can hook the L and R low level inputs on the subwoofer up to the L and R outputs on your receiver, decoder, etc. at the same time as hooking the LFE input up to the LFE output in order to reproduce the bass of all three channels with the subwoofer.

High Level Speaker Wire Connections

Your Definitive Technology ProSub 60 subwoofer can also be hooked up via high level connections. In this situation, you have the option of running your main speakers "full range" or rolling off the low end by using the high pass filter built into the subwoofer. For high level wiring, your interconnects are simply equal distance lengths of high quality speaker cable.

To hook up your ProSub 60 subwoofer via the high level connections, simply run speaker cable from the right channel high level connector on the subwoofer to the right channel speaker connector of your receiver or amplifier. Repeat this process for the left channel. Please take care that the red ("+") terminal on the subwoofer is connected to the red ("+") terminal on your receiver or amplifier, and that the black ("-") terminal on your receiver or amplifier is connected to the black ("-") terminal on the subwoofer. This will ensure absolute phase throughout your system.

Your main speakers can now be connected in one of two ways. If you wish to utilize the high pass filter built into your subwoofer, simply connect your main speakers to the high level out terminals on the subwoofer. Again, take care to make red to red ("+") and black to black ("-") terminal connections. This connection will provide a smoothly contoured roll-off of the low frequencies going to your main speakers starting at approximately 60 Hz. We recommend this hook-up (wiring the main speakers through the crossover in the subwoofer) when using ProMonitors. For more overall bass output when using full range main speakers, run the main speakers full range by hooking them up directly



to the amp. In many systems, if your speakers are true full range systems, you may find that you get a more satisfying sound by running the speakers full-range and crossing your subwoofer in fairly low (40-70 Hz). On the other hand, if you find that you are overdriving your main speakers, you will clearly be able to play your system louder by using the built-in high pass crossover for your main speakers.

The Advantages of Multiple Subwoofers

Definitive's ProSub 60 subwoofers are engineered to be used singly or in stereo pairs. With a single subwoofer, both left and right signals are sent to the subwoofer wherein they are combined via the electronic crossover into one composite signal. With stereo subwoofers, the left and right low frequency signals are reproduced by their own individual subwoofers. The use of one subwoofer achieves outstanding performance; however, the addition of a second subwoofer (one for the left and one for the right channel) clearly offers the highest level of performance achievable for both movies and music. The use of stereo subwoofers smoothes out the peaks and dips which result from the eigenmodes in your room. Two subwoofers couple much better to the air in your room (four times better) and of course offer double the power. In addition, some state-of-the-art home theater installations have begun to use a separate subwoofer hooked up to the rear (surround) channels and we recommend this for the absolute ultimate in performance. **In addition, some state-of-the-art Dolby Digital* home theater installations have begun to use a separate subwoofer hooked up to the rear (surround) channels and we recommend this for the absolute ultimate in performance.**

Dual Subwoofer Connections

When hooking up a stereo pair of subwoofers, wiring is quite similar to traditional high level connections. Here, instead of running both speaker cables from your receiver or amplifier to the left and right high level terminals on the subwoofer, you will run the left channel to the left channel subwoofer and the right channel to the right channel subwoofer. Again, take care to make red to red ("+") and black to black ("-") terminal connections.

Don't worry that on your left subwoofer the right channel terminals will be empty and that on the right channel subwoofer the left channel terminals will be empty—both channels are combined at the subwoofer's input stage. There is a possibility that with this type of wiring you may need to increase your gain a little bit for proper balance.

A dual subwoofer system using low level connections is equally simple. From your receiver or preamp, run an RCA-type interconnect from the left channel main output to the left channel low level input on the subwoofer you are using for the left channel. The process should then be repeated for the right channel. In this setup, main speaker connections are made between your receiver or amplifier in a traditional manner.

Operating Controls

Your Definitive Technology ProSub 60 subwoofer is equipped with a full complement of operating controls to ensure complete flexibility and maximum performance in any installation. Most of them basically are the "set and forget" type, although occasionally certain controls will require minor adjustments.

Gain Control

On the back panel of your subwoofer is a gain (volume) control. This control is used to raise or lower the output level of your subwoofer in relation to the other speakers in your system.

Low Pass Filter

Your subwoofer's back panel features a continuously variable low pass filter. This filter is continuously variable between 40 and 150 Hz. This low pass filter control is used to obtain the optimum transition between the subwoofer and your main speakers. This control should be set by ear for best performance in your room. Set it to where it sounds best to you. If you are running your main speakers full range, we would generally recommend setting the low pass filter fairly low (40-70 Hz). **When using the ProSub 60 with Definitive ProMonitors, please consult the instruction manual section "Using the ProSub 60 with Definitive ProMonitors."**

Powering Up Your Subwoofer

Your subwoofer contains a built-in, active powered subwoofer section as well as an electronic crossover and so each subwoofer must be plugged into an electrical socket of the appropriate voltage (as indicated on the back of your unit) using the plug on the end of the black cord attached to the electronics module on the back of the loudspeaker. The subwoofer has a special circuit which automatically turns the powered subwoofer section on when a signal is fed to the loudspeaker and does not require an on-off switch. The red LED on the back panel will light up when a signal is sensed and the amplifier turns on. It will automatically turn off a little while after the signal is discontinued.

The ProSub 60 has a special circuit which automatically turns the powered subwoofer section on when a signal is fed to the loudspeaker and does not require an on/off switch. We suggest plugging the ProSub 60 into a circuit which is on all the time and not into a switched outlet. When the ProSub 60 is plugged into a circuit and receives AC current, initially you will hear a relatively loud pop which is completely normal as the system first activates itself to stand-by mode. Then, when a program signal is fed to the speaker it will fully activate itself with a lower level pop which is normal. If you unplug the speaker or turn off the AC current going to it, it will reactivate itself with a pop when AC current is restored, which is normal.

Please note that after the cessation of a signal, it may take up to an hour for the amplifier to actually turn off from active to standby mode. In some instances, because of RF presence in your area, the red LEDs may not turn off. However, this is nothing to be concerned about as the amplifiers draw almost no power when they are idling.

Using the ProSub 60 with Definitive ProMonitors

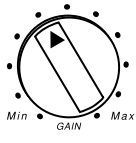
When using the ProSub with Definitive ProMonitors, please consult your ProMonitor instruction manual for specific information regarding hookup, wiring and placement.

Setting the Level and Crossover Frequency When Using the ProSub 60 with ProMonitors

When you have the ProMonitors wired to the speaker level outputs on your ProSub 60, the following are our suggestions for starting settings on your controls. Remember, these are just approximate settings and we suggest experimenting to determine the best-sounding settings for your particular set-up.

1. Set the variable low pass crossover control on the back of the ProSub 60 to approximately 2 o'clock. Please note that the exact frequency will depend on many factors including specific positions of the speakers in the room, so you might experiment with a slightly higher or lower setting to achieve ideal blending between the sub and the satellites for your particular set-up. Listen to a wide variety of music to determine the correct setting for this in your system.

2. Set the subwoofer level control to the first dot left of center. Please note that the exact level depends on many factors including your room size, position of the speakers, etc. as well as your personal listening taste, so you might experiment with the subwoofer level while listening to a wide variety of music until you achieve the ideal setting for your system.



Troubleshooting

If you experience any difficulties with your subwoofer, try the suggestions described below. If you are still having problems, please consult your Definitive Technology Authorized Dealer for assistance.

1. Make sure all your system interconnects and power cords are solidly in their place.

2. Should you experience any level of ground hum or noise, try plugging the subwoofer into the same circuit as your amplifier. Please note that some cable TV hookups induce hum into the whole system and require a special isolation device. Please consult your dealer.

3. The system is provided with sophisticated internal protection circuitry. If for some reason the protection circuitry is tripped, please turn down your system's volume and wait five minutes before trying the

system again. If the amplifier should overheat, the system will turn itself off until the amplifier cools and resets.

4. Check to be sure that your power cord has not been damaged.

5. Check that no foreign objects or liquid has entered the cabinet.

6. If you cannot get your subwoofer to turn on or if no sound comes out and you're sure the system is set up properly, please bring the subwoofer to your Definitive Technology Authorized Dealer for assistance.

Technical Assistance

It is our pleasure to offer assistance if you have any questions regarding your ProSub 60 or its set-up. Please contact your nearest Definitive Technology dealer or contact us directly at 410-363-7148.

Service

Service and warranty work on your Definitive loudspeakers will normally be performed by your local Definitive Technology dealer. If, however, you wish to return the speaker to us, please contact us first, describing the problem and requesting authorization as well as the location of the nearest factory service center. **Please note that the address given in this booklet is the address of our offices only. Under no circumstances should loudspeakers be shipped to our offices or returned without contacting us first and obtaining return authorization.**

Definitive Technology Offices
11433 Cronridge Drive, Suite K
Owings Mills, Maryland 21117
Phone: 410-363-7148

ProSub 60 Specifications

Dimensions	12½"H x 9½"W x 13¼"D
Frequency Response	23 Hz – 150 Hz
Driver Complement	One 8" long-throw woofer
Built-in Amplifier	150 watts RMS
High Pass Filter	6 dB/octave speaker level at 100 Hz
Low Pass Filter	24 dB/octave continuously variable (40 – 150 Hz)

Specifications subject to change

Visit us at www.definitivetech.com

* Dolby Pro-Logic, AC-3 and Dolby Digital are Registered Trademarks of Dolby Laboratories Licensing Corporation.

Limited Warranty:
5-Years for Drivers and Cabinets,
3-Years for Electronic Components

Definitive Technology warrants to the original retail purchaser only that this Definitive Technology Loudspeaker Product (the "Product") will be free from defects in materials and workmanship for a period of five (5) years covering the drivers and cabinets, and three (3) years for the electronic components from the date of the original purchase from a Definitive Technology Authorized Dealer. However, this warranty will automatically terminate prior to the expiration of five (5) years for the drivers and cabinets and three (3) years for the electronic components if the original retail purchaser sells or otherwise transfers the Product to any other party. The original retail purchaser shall hereinafter be referred to as "you." Defective Products must be shipped, together with proof of date of purchase, prepaid insured to the Authorized Dealer from whom you purchased the Product, or to the nearest factory service center. Product(s) must be shipped in the original shipping container or its equivalent; in any case the risk of loss or damage in transit is to be borne by you. If, upon examination at the Factory or a Definitive Technology Authorized Dealer, it is determined that the unit was defective in materials or workmanship at any time during this Warranty period, Definitive Technology or the Definitive Technology Authorized Dealer will, at its option, repair or replace this Product at no additional charge, except as set forth below. All replaced parts and Product(s) become the property of Definitive Technology. Product(s) replaced or repaired under this Warranty will be returned to you, within a reasonable time, freight collect.

This Warranty does not include service or parts to repair damage caused by accident, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage in excess of the rated maximum of the unit, cosmetic appearance of cabinetry not directly attributable to defects in materials or workmanship, or service, or repair or modification of the Product which has not been authorized by Definitive Technology. Definitive Technology makes no Warranty with respect to its Products purchased from dealers or outlets other than Definitive Technology Authorized Dealers. This Warranty is in lieu of all other expressed Warranties. If this Product is defective in material or workmanship as warranted above, your sole remedy shall be repair or replacement as provided above. In no event will Definitive Technology be liable to you for any incidental or consequential damages arising out of the use or inability to use the Product, even if Definitive Technology or a Definitive Technology Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation may not apply to you.

All implied warranties on the Product are limited to the duration of this expressed Warranty. Some states do not allow limitation on how long an implied Warranty lasts, so the above limitations may not apply to you. This Warranty gives you specific legal rights, and you also may have other rights which vary from state to state.

CE

This product complies with the essential requirements of EMC directives 89/336/EEC and 73/23/EEC (inclusive of 93/68/EEC) and carries the CE mark accordingly.

CNAT 012809